CLAIMS

What Is Claimed Is:

1. A signal conversion system, comprising:

a computing device including digital video content, the digital video content having a plurality of reference markers at a known time interval; and

a conversion device communicatively coupled to the computing device, the conversion device configured to

receive the digital video content in the form of an asynchronous video stream,

identify two or more reference markers in the asynchronous video stream,

determine a packet clock rate from the known time interval between the two or more reference markers and the amount of video content received between the two or more reference markers, and

generate an isochronous digital video stream having the video content at an interval corresponding to packet clock rate.

2. The signal conversion system of claim 1 wherein the conversion device includes

a spacing control device configured to operate as a state machine and determine the time interval between video stream segments in the isochronous digital video stream,

a first-in first-out stack to receive segments of the asynchronous video stream, and

an output device to retrieve the segments of the asynchronous video stream in a first-in first-out basis and transmit them at equal time intervals in the isochronous digital video stream.

3. The signal conversion system of claim 1 wherein the digital video content is an MPEG-2 transport stream data stream.

4. The signal conversion system of claim 1 wherein the conversion of the asynchronous video stream to the isochronous video stream occurs substantially in real-time.

5. The signal conversion system of claim 1 wherein the packet clock rate is determined by the computing device and provided to the conversion device.

6. The signal conversion system of claim 1 the packet clock rate is recalculated at a predetermined number of reference markers.

7. The signal conversion system of claim 1 the packet clock rate is recalculated at every instance of a reference marker.

8. The signal conversion system of claim 1 wherein the packet clock rate substantially corresponds to an original packet clock rate of the video content.

9. A system for transmitting a digital content stream comprising:

a transmission device providing an asynchronous signal containing a digital content stream, the digital content stream having a plurality of reference markers at a known time interval; and

a conversion device communicatively coupled to receive the asynchronous signal from the transmission device, the conversion device configured to

identify two or more reference markers in the digital content stream,

determine a first clock rate from the known time interval between the two or more reference markers and the amount of digital content received between the two or more reference markers, and

generate an isochronous digital content stream by spacing the digital content at an interval corresponding to the first clock rate.

10. The system of claim 9 wherein the conversion device includes

a spacing control device configured to operate as a state machine and determine the time interval between a plurality of digital content stream segments in the isochronous digital content stream,

a first-in first-out stack to receive a plurality of segments of the asynchronous video stream, and

an output device to retrieve the segments of the asynchronous video stream in a first-in first-out basis and transmit them at substantially equal time intervals in the isochronous digital video stream, the substantially equal time intervals corresponding to the first clock rate.

11. The system of claim 9 wherein the digital content stream is an MPEG-2 data stream.

12. The system of claim 9 wherein the digital content stream is a digital video content stream.

13. The system of claim 9 wherein the digital content stream is a digital audio content stream.

14. The system of claim 9 wherein the conversion of the asynchronous digital content stream to the isochronous digital content stream occurs substantially in real-time.

15. The system of claim 9 wherein the first clock rate is recalculated at a predetermined number of reference markers.

16. The system of claim 9 wherein the first clock rate is recalculated at every instance of a reference marker.

17. The system of claim 9 wherein the first clock rate substantially corresponds to an original clock rate of the digital content stream.

18. A method for converting asynchronous signals, carrying digital content stream, to isochronous signals, comprising:

identifying two or more reference markers in the digital content stream;

determining a first clock rate from a known time interval between the two or more reference markers and the amount of digital content received between the two or more reference markers; and

generating an isochronous signal, carrying the digital content stream, by spacing the digital content stream at an interval corresponding to the first clock rate.

19. The method of claim 18 wherein the digital content stream is a digital video content stream.

20. The method of claim 18 wherein the digital content stream is a digital audio content stream.

21. The method of claim 18 wherein the conversion of the asynchronous digital content stream to the isochronous digital content stream occurs substantially in real-time.

22. The method of claim 18 wherein the first clock rate is recalculated at a predetermined number of reference markers.

23. The method of claim 18 wherein the spacing of the digital content stream in the isochronous signal approximates an original clock rate for the digital content stream.

24. A method for transmitting a digital content stream, comprising:

generating an asynchronous signal containing the digital content stream, the digital content stream including a plurality of reference markers at a known time interval; and

converting the asynchronous signal to an isochronous signal by

identifying two or more reference markers in the digital content stream;

determining a first clock rate from a known time interval between the two or more reference markers and the amount of digital content received between the two or more reference markers, and

generating an isochronous signal, carrying the digital content stream, by spacing the digital content stream at an interval corresponding to the first clock rate.

25. The method of claim 24 wherein the conversion of the asynchronous digital content stream to the isochronous digital content stream occurs substantially in real-time.

26. The method of claim 24 wherein the first clock rate is recalculated at a predetermined number of reference markers.

27. The method of claim 24 wherein the spacing of the digital content stream in the isochronous signal approximates an original clock rate for the digital content stream.

28. A signal conversion device comprising:

a receiver to receive a digital content stream in the form of an asynchronous signal;

a clock detector coupled to the receiver, the clock detector to identify two or more reference markers in the asynchronous signal;

a spacing control device coupled to the clock detector, the spacing control device configured to operate as a state machine and determine the time interval between a plurality of digital content stream segments;

a stack coupled to the receiver, the stack to receive a plurality of digital content stream segments; and

an output device coupled to the stack and the spacing control device, the output device to retrieve the digital content stream segments from the stack and transmit them at substantially equal time intervals to generate an isochronous signal containing the digital content stream.

29. The signal conversion device of claim 28 wherein the substantially equal time intervals at which the digital content stream segments are transmitted in the isochronous signal approximate an original clock rate for the digital content stream.

30. A machine-readable medium having one or more instructions for converting an asynchronous signal to an isochronous signal which when executed by a processor causes the processor to:

receive an asynchronous signal containing a digital content stream, the digital content stream including a plurality of reference markers at a known time interval;

identify two or more reference markers in the digital content stream;

determine a first clock rate from a known time interval between the two or more reference markers and the amount of digital content received between the two or more reference markers; and

generate an isochronous signal, carrying the digital content stream, by spacing the digital content stream at an interval corresponding to the first clock rate.

31. The machine-readable medium of claim 30 wherein the conversion of the asynchronous signal to the isochronous signal occurs substantially in real-time.

32. The machine-readable medium of claim 30 wherein the first clock rate is recalculated at a predetermined number of reference markers.

33. The machine-readable medium of claim 30 wherein the spacing of the digital content stream in the isochronous signal approximates an original clock rate for the digital content stream.